

CCV uses the Environment Modules system for managing the software environment on its systems. To use the available software on these systems, you can **load** and **unload** modules to dynamically control your environment.

To see all available modules, use the **avail** command.

```
[ccvuser@login001 ~]% module avail
----- /gpfs/runtime/modulefiles -----
R/2.11.1          lapack/3.2.2          python/2.6.6
fftw/3.2.2       matlab/R2008b        scipy/0.8.0
gcc/4.5.1        matlab/R2009b(default) suitesparse/3.4.0
gotoblas2/1.13   metis/4.0.1
hdf5/1.8.5       numpy/1.5.0
```

To see what modules you currently have loaded in your environment, use the **list** command.

```
[ccvuser@login001 ~]% module list
Currently Loaded Modulefiles:
 1) gcc/4.5.1
```

The **load** command loads the specified module and any other modules it depends on.

```
[ccvuser@login001 ~]% module load numpy
[ccvuser@login001 ~]% module list
Currently Loaded Modulefiles:
 1) gcc/4.5.1      3) gotoblas2/1.13
 2) python/2.6.6  4) numpy/1.5.0
```

Loading a module changes your environment by modifying your paths and setting other variables. To see a summary of the changes implemented by a specific module, use the **display** command.

```
[ccvuser@login001 ~]% module display numpy
-----
/gpfs/runtime/modulefiles/numpy/1.5.0:
module-whatismodule NumPy - Scientific Computing Tools for Python
load python/2.6.6
setenv NUMPY_DIR /gpfs/runtime/opt/numpy/1.5.0
prepend-path PATH /gpfs/runtime/opt/numpy/1.5.0/bin
prepend-path LD_LIBRARY_PATH /gpfs/runtime/opt/numpy/1.5.0/lib
prepend-path PYTHONPATH /gpfs/runtime/opt/numpy/1.5.0/lib/python2.6/site-packages
```

The changes to your environment can be undone using the **unload** command.

```
[ccvuser@login001 ~]% module unload numpy
[ccvuser@login001 ~]% module list
Currently Loaded Modulefiles:
 1) gcc/4.5.1
```

Every available module has a description with further information and that you can query with the **help** command.

```
[ccvuser@login001 ccvuser]% module help numpy
----- Module Specific Help for 'numpy/1.5.0' -----

NumPy - Scientific Computing Tools for Python
Version 1.5.0

For more information, visit: http://numpy.scipy.org/

Dependencies (auto-loaded):
python/2.6.6, gotoblas2/1.13
```

If you want to access an older (non-default) version of a package, you can specify the version after the package name.

```
[ccvuser@login001 ~]% module help matlab/R2008b
```